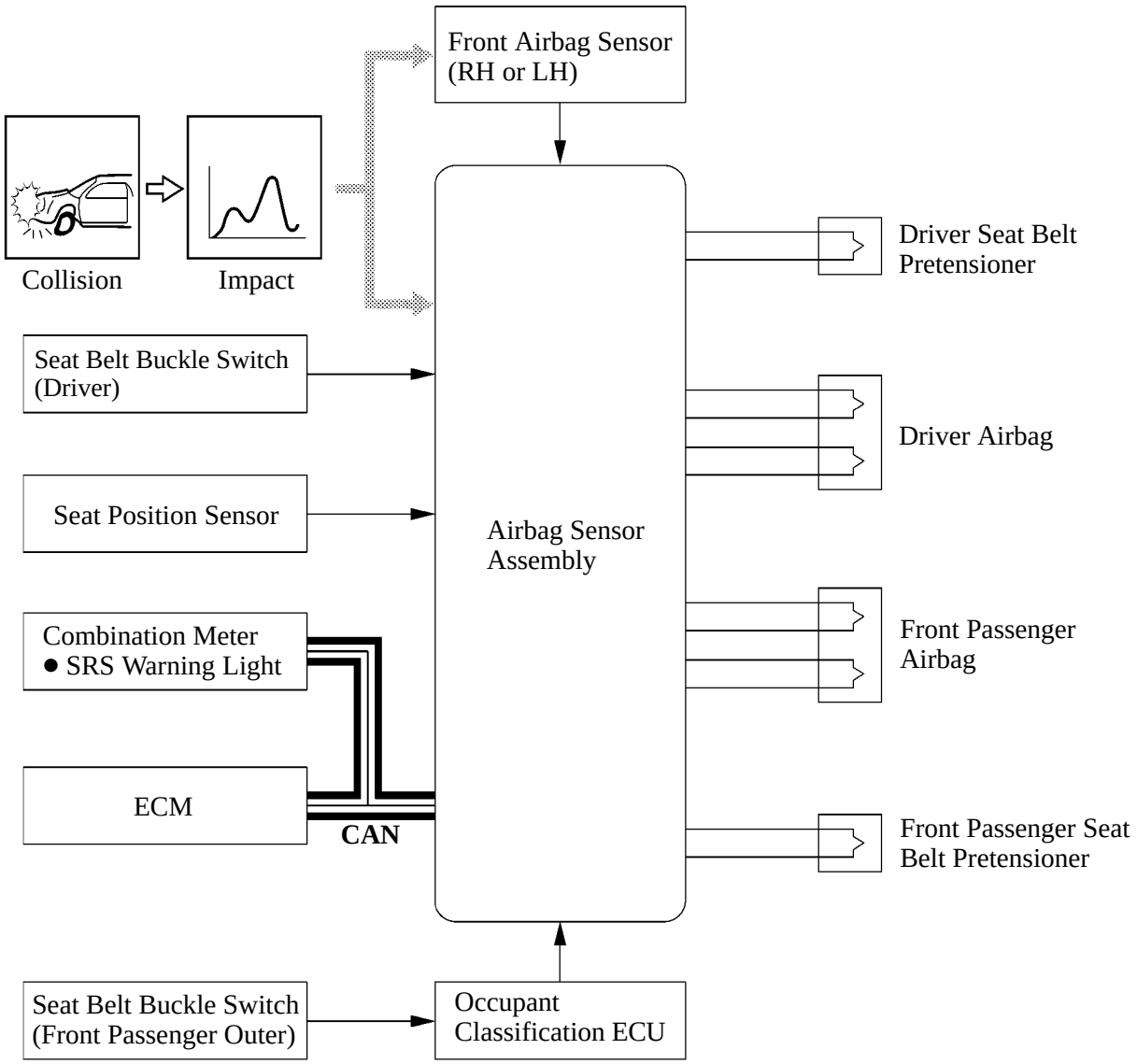
■AIRBAG FOR FRONTAL COLLISION

1. General

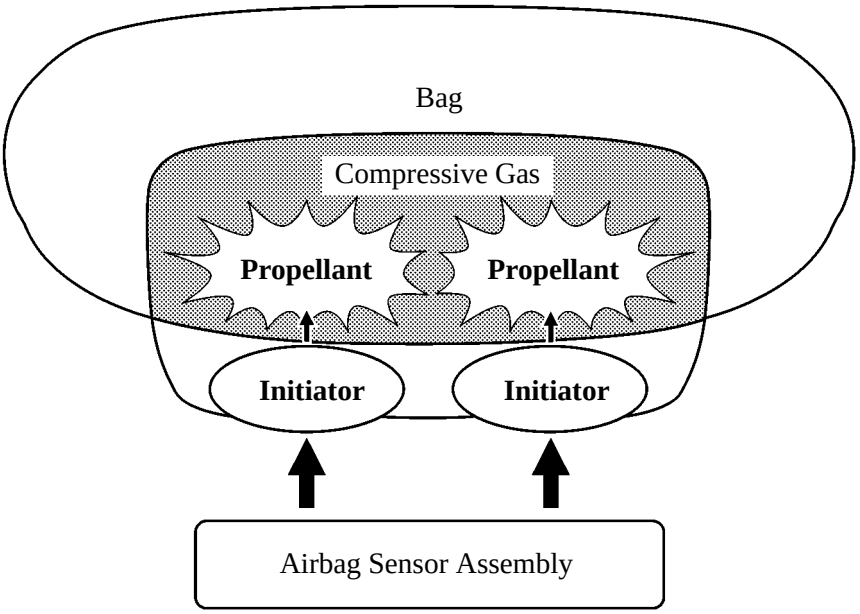
There are two airbags for frontal collisions: driver and front passenger. These airbags deploy simultaneously. The airbags for the driver and the front passenger use dual-stage control.
This controls the airbag inflating output optimum by judging the extent of the impact from front airbag sensors, and the extent of the impact from airbag sensor assembly, seat position and whether or not the seat belt is fastened.

▶ System Operation ◀



2. Dual-stage SRS Airbags

To support the dual-stage control, these airbag assemblies contain 2 sets of initiators and propellants. The airbag sensor assembly helps optimize the airbag inflation output by delaying the inflation timing of these initiators.

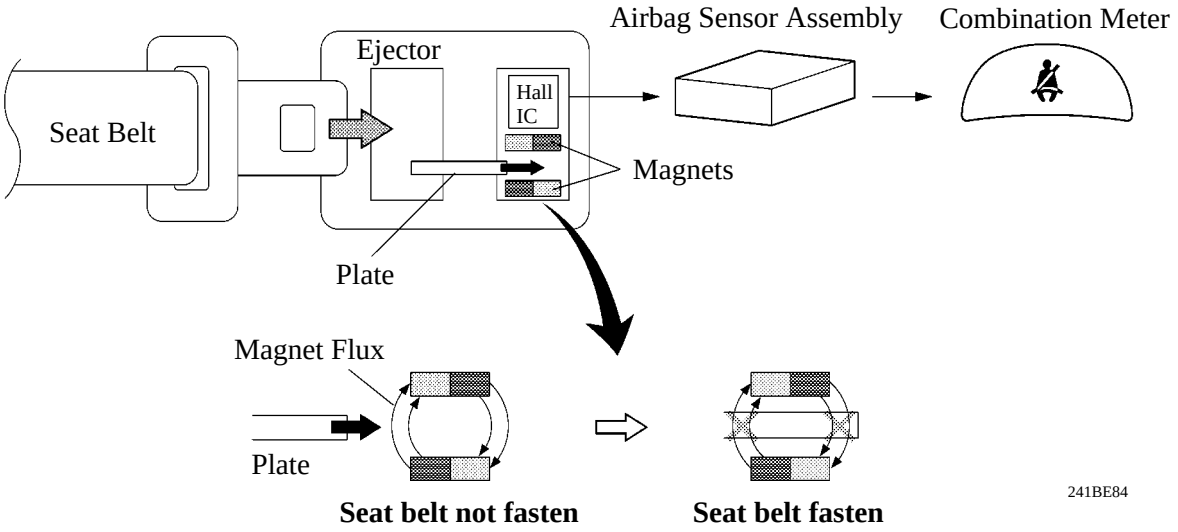


3. Front Airbag Sensor

- The electrical (acceleration sensor) type airbag sensor is used for front airbag sensor.
- The acceleration sensor is enclosed in the front airbag sensor. Based on the deceleration of the vehicle during a front collision, a distortion is created in the sensor and converted into an electrical signal. Accordingly, the extent of the initial collision can be detected in detail.

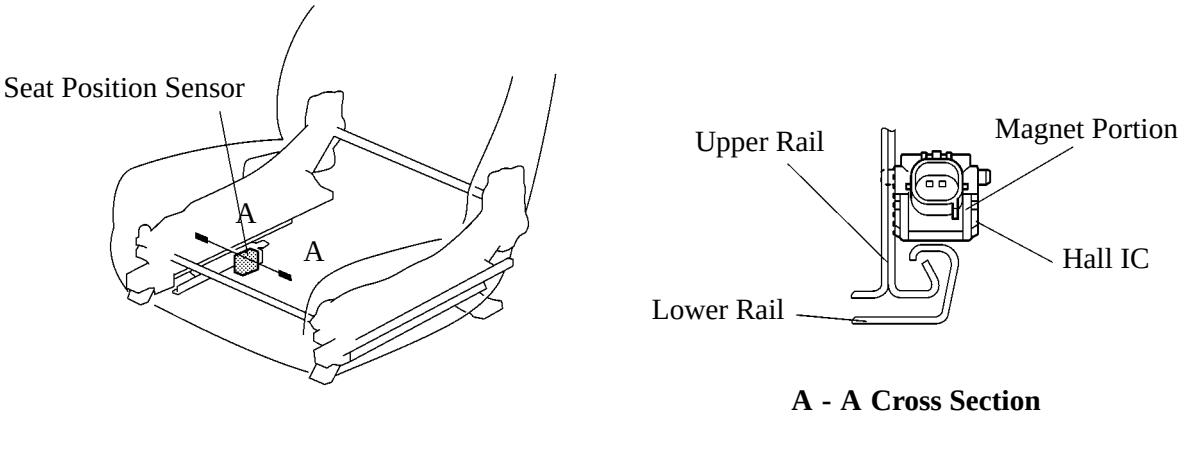
4. Seat Belt Buckle Switch (for Driver)

- The seat belt buckle switch which consists of an ejector with a plate, a Hall IC, and two magnets is integrated in the front seat inner belt assembly.
- The ejector with plate blocks the magnetic flux density between the two magnets. The Hall IC outputs this change to the airbag sensor assembly.



5. Seat Position Sensor (for Driver)

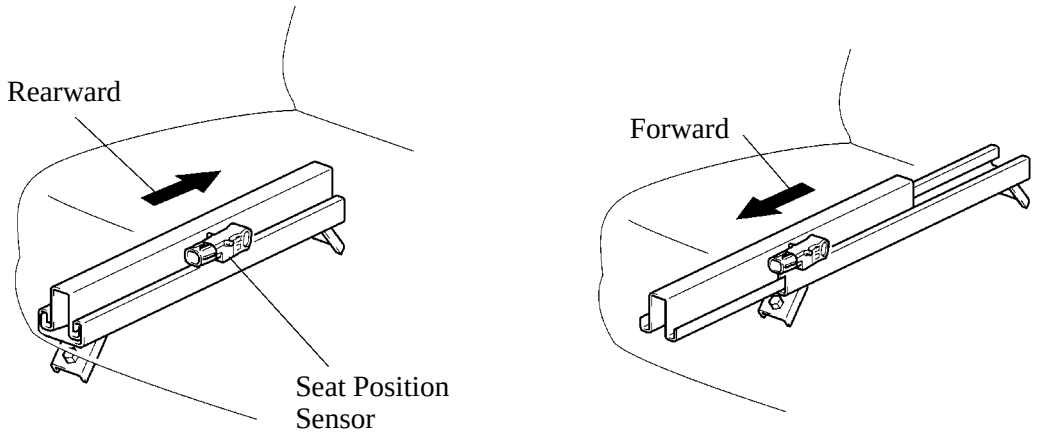
- The seat position sensor which is attached to the seat rail of the driver seat detects the sliding position of the seat. In addition, the shielding plate to make the seat position sensor judge the seat position is installed on this seat rail.
- The seat position sensor uses a Hall IC for its sensor and has a magnet portion on its opposite side.



A - A Cross Section

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- The seat position detection by the seat position sensor judges that the seat position is rearward if the shielding plate is between the sensor, and the seat position is forward if the shielding plate is not between the sensor.



Seat position is rearward **Seat position is forward**

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